CHAPTER 6

FUTURE DIRECTIONS IN THE UPPER ELK RIVER WATERSHED

6.1. BACKGROUND.

The Watershed Water Quality Management Plan serves as a comprehensive inventory of resources and stressors in the watershed, a recommendation for control measures, and a guide for planning activities in the next five-year watershed cycle and beyond. Water quality improvement will be a result of implementing both regulatory and nonregulatory programs.

In addition to the NPDES program, some state and federal regulations, such as the TMDL and ARAP programs, address point and nonpoint issues. Construction and MS4 stormwater rules (implemented under the NPDES program) are transitioning from Phase 1 to Phase 2. More information on stormwatrer rules may be found at: http://www.state.tn.us/environment/wpc/stormh2o/MS4.htm.

This Chapter addresses point and nonpoint source approaches to water quality problems in the Upper Elk River Watershed as well as specific NPDES permittee information.

6.2. COMMENTS FROM PUBLIC MEETINGS. Watershed meetings are open to the public, and most meetings were represented by citizens who live in the watershed, NPDES permitees, business people, farmers, and local river conservation interests. Locations for meetings were frequently chosen after consulting with people who live and work in the watershed. Everyone with an interest in clean water is encouraged to be a part of the public meeting process. The times and locations of watershed meetings are posted at: http://www.state.tn.us/environment/wpc/public.htm.

6.2.A. Year 1 Public Meeting. The first Upper Elk River Watershed public meeting was held April 22, 1997 in Winchester. The goals of the meeting were to 1) present, and review the objectives of, the Watershed Approach, 2) introduce local, state, and federal agency and nongovernment organization partners, 3) review water quality monitoring strategies, and 4) solicit input from the public.

6.2.B. Year 3 Public Meeting. The second Upper Elk River Watershed public meeting was held October 26, 1999 at the Winchester Courthouse. The goals of the meeting were to 1) provide an overview of the watershed approach, 2) review the monitoring strategy, 3) summarize the most recent water quality assessment, 4) discuss the TMDL schedule and citizens' role in commenting on draft TMDLs, and 5) discuss BMPs and other nonpoint source tools available through the Tennessee Department of Agriculture 319 Program and NRCS conservation assistance programs.

6.2.C. Year 5 Public Meeting. The third scheduled Upper Elk River Watershed public meeting was held November 3, 2003 at the Winchester Courthouse. The meeting featured six educational components:

- Overview of draft Watershed Water Quality Management Plan slide show
- Benthic macroinvertebrate samples and interpretation
- SmartBoard™ with interactive GIS maps
- "How We Monitor Streams" self-guided slide show
- "Why We Do Biological Sampling" self-guided slide show
- Tennessee Valley Authority display

In addition, citizens had the opportunity to make formal comments on the draft Watershed Water Quality Management Plan and to rate the effectiveness of the meeting.

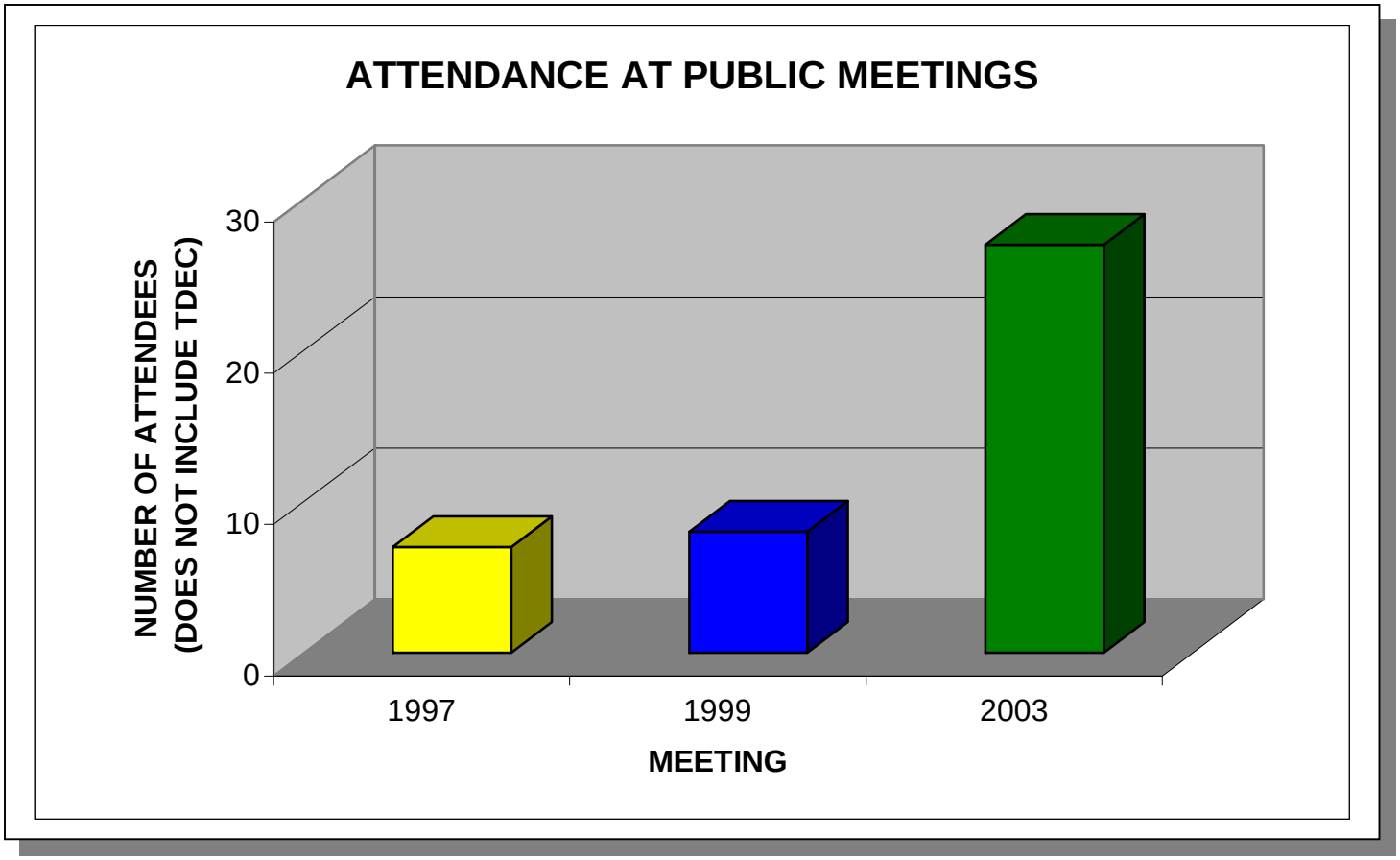

Figure 6-1. Attendance at Public Meetings in the Upper Elk River Watershed. *The 1997 and 1999 watershed meeting numbers represent Upper Elk River, Lower Elk River, Pickwick Lake, and Wheeler Lake, Watershed joint meetings.*

Figure 6-2. Informal discussions are important in meeting citizens' interest in understanding Water Pollution Control's activities in the watershed, and in communicating to the Department any concerns they might have.

Figure 6-3. Partners, like the Tennessee Valley Authority, are important in the watershed approach, and use the watershed meetings to communicate their activities to the public.

6.3. APPROACHES USED.

6.3.A. Point Sources. Point source contributions to stream impairment are primarily addressed by NPDES and ARAP permit requirements and compliance with the terms of the permits. Notices of NPDES and ARAP draft permits available for public comment can be viewed at http://www.state.tn.us/environment/wpc/wpcppo/. Discharge monitoring data submitted by NPDES-permitted facilities may be viewed at http://www.epa.gov/enviro/html/pcs/pcs_query_java.html.

The purpose of the TMDL program is to identify remaining sources of pollution and allocate pollution control needs in places where water quality goals are still not being achieved. TMDL studies are tools that allow for a better understanding of load reductions necessary for impaired streams to return to compliance with water quality standards. More information about Tennessee's TMDL program may be found at:
http://www.state.tn.us/environment/wpc/tmdl.php

TMDLs are prioritized for development based on many factors.

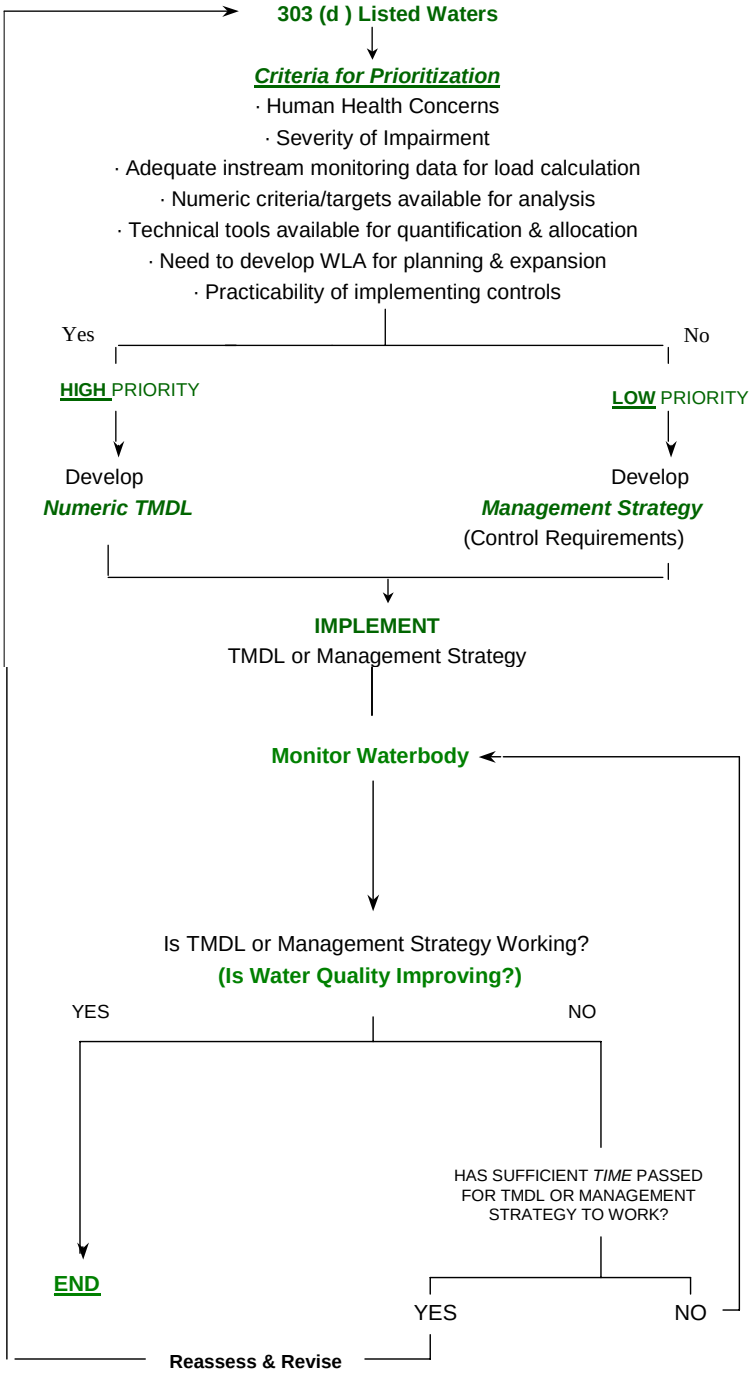

Figure 6-4. Prioritization scheme for TMDL Development.

6.3.B. Nonpoint Sources

Common nonpoint sources of pollution include urban runoff, riparian vegetation removal, and inappropriate land development, agricultural, and road construction practices. Since nonpoint pollution exists essentially everywhere rain falls and drains to a stream, existing point source regulations can have only a limited effect, so other measures are necessary.

There are several state and federal regulations that address some of the contaminants impacting waters in the Upper Elk River Watershed. Most of these are limited to only point sources: a pipe or ditch. Often, controls of point sources are not sufficient to protect waters, so other measures are necessary. Some measures include voluntary efforts by landowners and volunteer groups, while others may involve new regulations. Many agencies, including the Tennessee Department of Agriculture and NRCS, offer financial assistance to landowners for corrective actions (like Best Management Practices) that may be necessary for recovery of impacted streams. Many nonpoint problems will require an active civic involvement at the local level geared towards establishment of improved zoning guidelines, building codes, streamside buffer zones and greenways, and general landowner education.

The following text describes certain types of impairments, causes, suggested improvement measures, and control strategies. The suggested measures and streams are only examples and efforts should not be limited to only those streams and measures mentioned.

6.3.B.i. Sedimentation.

6.3.B.i.a. From Construction Sites. Construction activities have historically been considered “nonpoint sources.” In the late 1980’s, EPA designated them as being subject to NPDES regulation if more than 5 acres are disturbed. In the spring of 2003, that threshold became 1 acre. The general permit issued for such construction sites sets out conditions for maintenance of the sites to minimize pollution from stormwater runoff, including requirements for installation and inspection of erosion controls. Also, the general permit imposes more stringent inspection and self-monitoring requirements on sites in the watershed of streams that are already impaired due to sedimentation. Regardless of the size, no construction site is allowed to cause a condition of pollution.

Construction sites within a sediment-impaired watershed may also have higher priority for inspections by WPC personnel, and are likely to have enforcement actions for failure to control erosion. Historically, construction activities have not been a large source of the sediment problems within the Upper Elk River Watershed, due to the rather sparsely populated nature of most of the watershed. However, increased population growth in the urban centers of Fayetteville, Tullahoma, and Winchester/Decherd (among others) will require local regulation and oversight to prevent construction runoff from impacting area streams.

6.3.B.i.b. From Channel and/or Bank Erosion. Many streams in the Upper Elk River Watershed suffer from varying degrees of stream bank erosion. When stream channels are altered, or large tracts of land are cleared, increasing storm runoff, banks can

become unstable and highly erodable. Heavy livestock traffic can also severely disturb stream banks. Destabilized banks contribute to sediment loading and accelerate the loss of riparian vegetation. This cycle is especially problematic in the headwater areas of the Upper Elk River Watershed, where the very sandy plateau soils and shallow rooted trees are especially vulnerable. Most of the land and channel alterations center on agricultural practices, including row-cropping too close to the stream and livestock grazing.

Several agencies such as the Natural Resources Conservation Service (NRCS) and the Tennessee Department of Agriculture (TDA), as well as watershed citizen groups, are working to stabilize portions of stream banks using bioengineering and other techniques. Many of the affected streams could benefit from these types of projects, including Stewart Creek, Pleasant Valley Creek, Little Swan Creek, Farris Creek, and West Cane Creek. Other methods or controls that might be necessary to address common problems are:

Voluntary activities

- Re-establishment of bank vegetation (examples: Coffee Creek, Robinson Creek, Little Cane Creek, Stephens Creek, and many others).
- Establish buffer zones along streams running through row crop fields or nurseries (examples: Blue Spring Creek, Gum Creek, Hessey Branch).
- Establish off-channel watering areas for cattle by moving watering troughs and feeders back from stream banks (examples: Short Creek, Shelton Creek, and Indian Creek).
- Limit cattle access to streams and bank vegetation (examples: Mud Creek, Yellow Branch, and Childer Creek).

Additional strategies

- Better community planning for the impacts of development on small streams, especially development in growing areas (examples: small streams in and around Tullahoma, Winchester, and Fayetteville).
- Restrictions requiring post construction run-off rates to be no greater than pre-construction rates in order to avoid in-channel erosion (examples: Wagner Creek, Blue Creek, and Rock Creek).
- Additional restrictions on logging in streamside management zones.
- Prohibition on clearing of stream and ditch banks (example: Gum Creek). *Note: Permits may be required for any work along streams.*
- Additional restriction to road and utilities crossings of streams.
- Restrictions on the use of off-highway vehicles on stream banks and in stream channels.

6.3.B.i.c. From Agriculture and Silviculture. Even though there is an exemption in the Water Quality Control Act stating that normal agricultural and silvicultural practices that do not result in a point source discharge do not have to obtain a permit, efforts are being made to address impacts due to these practices.

The Master Logger Program has been in place for several years to train loggers how to plan their logging activities and to install Best Management Practices that lessen the impact of logging activities. Recently, laws and regulations were enacted which established the expected BMPs to be used and allows the Commissioners of the

Departments of Environment and Conservation and of Agriculture to stop a logging operation that has failed to install these BMPs and so are impacting streams. Only the headwater area of the Elk River on the plateau retains large tracts of forested land which have the potential to be affected by larger-scale logging operations.

Since the Dust Bowl era, the agriculture community has strived to protect the soil from wind and soil erosion. Agencies such as the Natural Resources Conservation Service (NRCS), the University of Tennessee Agricultural Extension Service, and the Tennessee Department of Agriculture have worked to identify better ways of farming, to educate the farmers, and to install the methods that address the sources of some of the impacts due to agriculture. Cost sharing is available for many of these measures. Agriculture is the most widespread land-use in the Upper Elk River Watershed, therefore impacting the greatest number of stream miles.

6.3.B.ii. Pathogen Contamination.

Possible sources of pathogens are inadequate or failing septic tank systems, overflows or breaks in public sewer collection systems, poorly disinfected discharges from sewage treatment plants, and fecal matter in streams and storm drains due to pets, livestock and wildlife. Permits issued by the Division of Water Pollution Control regulate discharges from point sources and require adequate control for these sources. Individual homes are required to have subsurface, on-site treatment (i.e., septic tank and field lines) if public sewers are not available. Septic tank and field lines are regulated by the Division of Ground Water Protection within the Columbia Environmental Assistance Center and delegated county health departments. In addition to discharges to surface waters, businesses may employ either subsurface or surface disposal of wastewater. The Division of Water Pollution Control regulates surface disposal.

Currently, only three stream systems in the Upper Elk River Watershed are known to have excessive pathogen contamination (however, many streams have not been screened). These are Juanita Creek (Grundy County), and Cane Creek and Swan Creek (Lincoln County). Juanita Creek is in a small urban area, with its bacterial contamination coming from stormwater runoff, failing septic systems, and sewage collection system leaks. Cane Creek and Swan Creek are in agricultural areas, with large livestock operations generating great quantities of manure. Measures that may be necessary to control pathogens in these streams, and in others with less serious problems, include:

Voluntary activities

- Limiting livestock access to streams, including use of off-channel watering of livestock (example: Cane Creek).
- Proper management of animal waste from feeding operations (example: Swan Creek).
- Better maintenance of sub-surface disposal systems.

Enforcement strategies

- Greater enforcement of regulations governing on-site wastewater treatment.
- Timely and appropriate enforcement for non-complying sewage treatment plants, large and small, and their collection systems.

- Identification of Concentrated Animal Feeding Operations not currently permitted, and enforcement of current regulations.

Additional strategies

- Restrict development in areas where sewer is not available and treatment by subsurface disposal is not an option due to poor soils, floodplains, or high water tables. This is particularly important in the headwaters of the Elk River Watershed, given the geology of the Cumberland Plateau and Escarpment.
- Develop and enforce leash laws and controls on pet fecal material in areas with higher population densities.
- Greater efforts by sewer utilities to identify leaking lines or overflowing manholes, (example: Juanita Creek).
- More efforts by local urban public works and utilities to identify and control contaminated stormwater runoff sources entering storm sewer systems.

6.3.B.iii. Excessive Nutrients and/or Dissolved Oxygen Depletion.

These two impacts are usually listed together because high nutrients often contribute to low dissolved oxygen within a stream. Since nutrients often have the same source as pathogens, the measures previously listed can also address many of these problems. Elevated nutrient loadings are also often associated with urban runoff from impervious surfaces, from fertilized lawns and croplands, and inappropriate sewage disposal practices.

Other sources of nutrients can be addressed by:

Voluntary activities

- Educate homeowners and lawn care companies in the proper application of fertilizers.
- Encourage landowners, developers, and builders to leave stream buffer zones. Streamside vegetation can filter out many nutrients and other pollutants before they reach the stream. These riparian buffers are also vital along livestock pastures. Caney Hollow Creek, Factory Branch, Farris Creek, Dry Creek, and many others could benefit from buffer zones that filter nutrient runoff.
- Use grassed drainage ways that can remove fertilizer before it enters streams.
- Use native plants for landscaping since they don't require as much fertilizer and water.

Physical changes to streams can prevent them from providing enough oxygen to biodegrade the materials that are naturally present. A few additional actions can address this problem:

- Maintain shade over a stream. Cooler water can hold more oxygen and retard the growth of algae. As a general rule, all stream channels suffer from canopy removal. An intact riparian zone also acts as a buffer to filter out nutrient loads before they enter the water.

- Discourage impoundments. Ponds and lakes do not aerate water, and can cause an increase in water temperature. *Note: Permits may be required for any work on a stream, including impoundments.*

Regulatory Strategies

- Greater enforcement of regulations governing on-site wastewater treatment.
- More stringent permit limits for nutrients discharged from sewage treatment plants (including Rock Creek and East Fork Mulberry Creek).
- Timely and appropriate enforcement for non-complying sewage treatment plants, large and small, and their collection systems.
- Identification of Concentrated Animal Feeding Operations not currently permitted, and enforcement of current regulations.

6.3.B.iv. Toxins and Other Materials.

Although some toxic substances are discharged directly into streams from a point source, much of these materials are washed in during rainfalls from an upland location or via improper waste disposal practices that contaminate groundwater. In the Upper Elk River Watershed, a relatively small number of streams are damaged by stormwater runoff from industrial areas or urban areas. More stringent inspection and regulation of permitted industrial activities, and local stormwater quality initiatives and regulations, could help reduce the amount of contaminated runoff reaching state waters. Examples of streams that would benefit from these measures include Wagner Creek, Rock Creek, and Blue Creek.

Woods Reservoir represents a particularly large-scale example of toxic releases into streams. Due to decades of PCBs being discharged into this impoundment of the Elk River, the bottom sediment has become highly contaminated, and the lake is now posted for fish consumption due to this legacy pollutant.

Many materials enter our streams due to apathy, or lack of civility or knowledge by the public. Litter in roadside ditches, garbage bags tossed over bridge railings, paint brushes washed off over storm drains, and oil drained into ditches are all blatant examples of pollution in streams. Some can be addressed by:

Voluntary activities

- Providing public education.
- Painting warnings on storm drains that connect to a stream
- Sponsoring community clean-up days.
- Landscaping of public areas.
- Encouraging public surveillance of their streams and reporting of dumping activities to their local authorities.

Needing regulation

- Prohibition of illicit discharges to storm drains.
- Litter laws and strong enforcement at the local level.

6.3.B.v. Habitat Alteration.

The alteration of the habitat within a stream can have severe consequences. Whether it is the removal of the vegetation providing a root system network for holding soil particles together, the release of sediment, which increases the bed load and covers benthic life and fish eggs, the removal of gravel bars, "cleaning out" creeks with heavy equipment, or the impounding of the water in ponds and lakes, many alterations impair the use of the stream for designated uses. Habitat alteration also includes the draining or filling of wetlands.

Measures that can help address this problem are:

Voluntary activities

- Organizing stream cleanups removing trash, limbs and debris before they cause blockage.
- Avoiding use of heavy equipment to "clean out" streams.
- Planting vegetation along streams to stabilize banks and provide habitat (nearly all streams could benefit from this).
- Encouraging developers to avoid extensive culverts in streams.

Current regulations

- Restrict modification of streams by such means as culverting, lining, or impounding.
- Require off-site mitigation for impacts to streams and wetlands when modifications are allowed. Like most large dams, Tims Ford Dam and Woods Reservoir Dam have chronically caused serious impacts to the Elk River from low oxygen levels as well as unnatural thermal and flow alterations in the downstream tailwaters.

Additional Enforcement

- Increased enforcement may be needed when violations of current regulations occur.

In addition, there are three streams in the Upper Elk River Watershed that have been impacted due to unnatural flow and thermal alterations caused by permitted dischargers. The batch discharge system at the Tullahoma Sewage Treatment Plant has degraded Rock Creek, and some discharges from AEDC have impacted Rollins Branch and Rowlands Creek. New technology and facility design at these two facilities may be necessary to mitigate the long-standing negative effects produced by operations at these sites.

6.4. PERMIT REISSUANCE PLANNING

Under the *Tennessee Water Quality Control Act*, municipal, industrial and other dischargers of wastewater must obtain a permit from the Division. Approximately 1,700 permits have been issued in Tennessee under the federally delegated National Pollutant Discharge Elimination System (NPDES). These permits establish pollution control and monitoring requirements based on protection of designated uses through implementation of water quality standards and other applicable state and federal rules.

The following three sections provide specific information on municipal, industrial, and water treatment plant active permit holders in the Upper Elk River Watershed. Compliance information was obtained from EPA's Permit Compliance System (PCS). All data was queried for a five-year period between January 1, 2001 and December 31, 2006. PCS can be accessed publicly through EPA's Envirofacts website. This website provides access to several EPA databases to provide the public with information about environmental activities that may affect air, water, and land anywhere in the United States:

http://www.epa.gov/enviro/html/ef_overview.html

Stream Segment information, including designated uses and impairments, are described in detail in Chapter 3, *Water Quality Assessment of the Upper Elk River Watershed*.

6.4.A. Municipal Permits

TN0021806 Monteagle Sewage Treatment Plant, Plant #1

Discharger rating: Major
City: Monteagle
County: Grundy
EFO Name: Chattanooga
Issuance Date: 8/30/02
Expiration Date: 8/30/07
Receiving Stream(s): Mile 1.3 tributary to Gilliam Creek at mile 1.6 to Caldwell Creek at mile 1.5
HUC-12: 060300030103
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: WAS to aerobic dig to dry beds or to land application

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	2	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	3.1	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.5	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	2.1	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	3	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	2.3	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	3.1	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	1.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	4.8	lb/day	DMax Load	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Summer	30	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Summer	52	lb/day	DMax Load	3/Week	Composite	Effluent
CBOD5	Summer	20	mg/L	DMin Conc	3/Week	Composite	Effluent
CBOD5	Summer	42	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Summer	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Winter	40	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Winter	73	lb/day	DMax Load	3/Week	Composite	Effluent
CBOD5	Winter	52	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Winter	35	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Winter	25	mg/L	DMin Conc	3/Week	Composite	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent

Table 6-1a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Composite	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	83	lb/day	DMax Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	63	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-1b.

Tables 6-1a –b. Permit Limits Monteagle Sewage Treatment Plant #1.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Settleable Solids
- 7 Ammonia
- 2 CBOD
- 2 Fecal Coliform
- 12 Suspended Solids % Removal
- 1 Chlorine
- 25 bypasses
- 12 overflows

Enforcement:
Commissioner's Order #04-0625
Database notes:
City of Monteagle is a municipality in Grundy County, Tennessee that owns and operates two wastewater treatment plants (WWT plants #1 and #2) and associated sewage collection systems. On November 20, 2002, the Water Quality Control Board

issued Agreed Order #02-0192 to the Respondent to resolve two previous Director's Orders (#01-0168D, #01-065D) for effluent violations. Follow-up compliance evaluation inspections at plants #1 and #2 revealed conditions in violation of permit parameters, persistent operational deficiencies, and failure to comply with the terms of the Agreed Order. Accumulation of waste sludge resulting from improper operation of plant #2 was observed in Trussel Creek and its tributary.
01/11/06 Agreed Order entered by the Secretary of State.
05/10/06 Requested an extension on the SORP until 5/22/06.
06/16/06 The Trussell Creek mitigation plan. Steps 1,2,4, &5 were acceptable. Step 3 was denied. Step 3 proposed to build a retention pond in Trusseell Creek.
10/3/06 Approval of sewer connections granted.
10/31/06 Letter sent from the permit section requesting additional samples as required by permit before the permit can be modified.

EFO Comments:
None.

TN0064815 Monteagle Sewage Treatment Plant, Plant #2

Discharger rating: Major
City: Monteagle
County: Grundy
EFO Name: Chattanooga
Issuance Date: 10/29/04
Expiration Date: 11/30/07
Receiving Stream(s): Unnamed tributary at mile 1.0 to Trussel Creek
HUC-12: 060300030103
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Secondary with trickling filter, submerged bed nitrification, clarification, chlorination, dechlorination and step aeration, and aerobic sludge digester

Segment	TN06030003044_0730
Name	Trussel Creek
Size	4.3
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed)
Causes	Solids (Suspended/Bedload), Nutrient/Eutrophication Biological Indicators, 461, Oxygen, Dissolved
Sources	Municipal Point Source Discharges

Table 6-2. Stream Segment Information for Monteagle Sewage Treatment Plant, Plant #2.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	4	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.24	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	3	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	2.6	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	6	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	10	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	16	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	7.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	2.36	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	4.9	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	All Year	40	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	73	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	35	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	52	lb/day	MAvg Load	3/Week	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent

Table 6-3a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Conc	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
NOEL 7day Ceriodaphnia Dubia	All Year	100	Percent	MAvg Min	Quarterly	Calculated	Effluent
NOEL 7day Fathead Minnows	All Year	100	Percent	MAvg Min	Quarterly	Calculated	Effluent
Nitrogen Total (as N)	All Year	5	mg/L	MAvg Conc	Bi-monthly	Composite	Effluent
Phosporus, Dissolved	All Year		mg/L	MAvg Conc	Bi-monthly	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Composite	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	83	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	83	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-3b.

Tables 6-3a-b. Permit Limits for Monteagle Sewage Treatment Plant, Plant #2.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 21 Ammonia
- 3 COD
- 4 Suspended Solids % Removal

Enforcement:
Commissioner's Order #04-0625
Database notes:
City of Monteagle is a municipality in Grundy County, Tennessee that owns and operates two wastewater treatment plants (WWT plants; plants #1 and #2) and associated sewage collection systems. On November 20, 2002, the Water Quality Control Board issued Agreed Order #02-0192 to the Respondent to resolve two previous Director's Orders (#01-0168D, #01-065D) for effluent violations. Follow-up compliance evaluation inspections at plants #1 and #2 revealed conditions in violation of permit parameters, persistent operational deficiencies, and failure to comply with the terms of the Agreed Order. Accumulation of waste sludge resulting from improper operation of plant #2 was observed in Trussel Creek and its tributary.
01/11/06 Agreed Order entered by the Secretary of State.
05/10/06 Requested an extension on the SORP until 5/22/06.

06/16/06 The Trussell Creek mitigation plan. Steps 1,2,4, &5 were acceptable. Step 3 was denied. Step 3 proposed to build a retention pond in Trusseell Creek.
10/3/06 Approval of sewer connections granted by Dick Urban.
10/31/06 Letter sent from the permit section requesting additional samples as required by permit before the permit can be modified.

EFO Comments:
None.

TN0020508 Decherd Water Works Sewage Treatment Plant

Discharger rating: Major
City: Decherd
County: Franklin
EFO Name: Columbia
Issuance Date: 6/30/04
Expiration Date: 7/31/07
Receiving Stream(s): Wagner Creek at mile 2.4
HUC-12: 060300030401
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Expansion of municipal treatment capacity discharging to Outfall 001from 0.5 to 1.0 MGD

Segment	TN06030003032_1000
Name	Wagner Creek
Size	18.8
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Nitrates, Physical substrate habitat alterations, Escherichia coli
Sources	Municipal (Urbanized High Density Area), Municipal Point Source Discharges, Channelization

Table 6-4. Stream Segment Information for Decherd Sewage Treatment Plant, Plant #2.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	2.4	MGD	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	2.4	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.2	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	5	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.8	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.8	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	9.2	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.1	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	7.5	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	15	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	5	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	2	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	17.5	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	8.3	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	2.1	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	5	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	3.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	29.2	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	14.6	lb/day	WAvg Load	3/Week	Composite	Effluent

Table 6-5a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	Winter	35	mg/L	WAvg Conc	3/Week	Composite	Effluent
Bypass of Treatment (flow rate)	All Year		Visual	MAvg Conc	Monthly		Effluent
Bypass of Treatment (flow rate)	All Year		Visual	MAvg Load	Monthly		Effluent
CBOD % Removal	All Year	40	Percent	MAvg % Removal	3/Week	Calculated	Effluent
CBOD % Removal	All Year	40	Percent	MAvg % Removal	3/Week	Calculated	Effluent
CBOD5	All Year	85	Percent	MAvg Min	Monthly	Composite	Effluent
CBOD5	All Year	20	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year	10	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	125	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	63	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	15	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	15	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	83	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	42	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year	10	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year	20	mg/L	DMax Conc	3/Week	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Conc	3/Week	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Conc	Daily	Composite	Effluent
Flow	All Year		MGD	DMax Conc	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Conc	Daily	Composite	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Conc	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Conc	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Conc	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Conc	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Conc	Daily	Composite	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	100	Percent	DMin Conc	Quarterly	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	DMax Conc	2/Month	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	MAvg Conc	2/Month	Composite	Effluent
Nitrogen Total (as N)	Summer		mg/L	DMax Conc	2/Week	Composite	Effluent
Nitrogen Total (as N)	Summer	11	mg/L	MAvg Conc	2/Week	Composite	Effluent
Nitrogen Total (as N)	Summer	91.7	lb/day	MAvg Load	2/Week	Composite	Effluent

Table 6-5b.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/Month	DMax Load	Continuous	Visual	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Effluent
Overflow Use Occurences	All Year		Occurences/Month	DMax Load	Continuous	Visual	Effluent
Phosphorus Total	All Year		mg/L	DMax Conc	2/Month	Composite	Effluent
Phosphorus Total	All Year		mg/L	MAvg Conc	2/Month	Composite	Effluent
Phosphorus Total	Summer		lb/day	DMax Conc	2/Week	Composite	Effluent
Phosphorus Total	Summer	0.5	mg/L	MAvg Conc	2/Week	Composite	Effluent
Phosphorus Total	Summer	4.2	lb/day	MAvg Load	2/Week	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Grab	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	334	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	167	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS	All Year	250	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	125	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS % Removal	All Year	85	Percent	MAvg % Removal	Monthly	Calculated	%Removal
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	%Removal
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	%Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-5c.

Tables 6-5a-c. Permit Limits for Decherd Sewage Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 2 Total Nitrogen
- 2 Settleable Solids
- 1 Total Phosphorus
- 1 Suspended Solids % Removal.
- 7 Overflows
- 21 Bypasses

EFO Comments:
None.

TN0025101 Lynchburg Sewage Treatment Plant

Discharger rating: Minor
City: Lynchburg
County: Moore
EFO Name: Columbia
Issuance Date: 3/31/06
Expiration Date: 5/31/08
Receiving Stream(s): East Fork Mulberry Creek at mile 11.1
HUC-12: 060300030701
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Extended Aeration

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	7.8	lb/day	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	3.9	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	5.8	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	9.7	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	14.5	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	14	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	26	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	7	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	17	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	10.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	All Year	40	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	88	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	35	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	63	lb/day	MAvg Load	3/Week	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Conc	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Conc	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Conc	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Conc	Daily	Continuous	Influent (Raw Sewage)
IC25 7day Ceriodaphnia Dubia	All Year	35.25	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	35.25	Percent	DMin Conc	Quarterly	Composite	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather

Table 6-6a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Grab	Effluent
TRC	All Year	0.05	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	75	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	100	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-6b.

Tables 6-6a-b. Permit Limits for Lynchburg Sewage Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 25 TSS
- 29 Ammonia
- 11 CBOD
- 50 Overflows
- 2 Bypasses

EFO Comments:
None – need to check with Nashville EFO.

TN0027766 TDEC Tims Ford State Park

Discharger rating: Major
City: Winchester
County: Franklin
EFO Name: Columbia
Issuance Date: 2/28/02
Expiration Date: 2/28/02
Receiving Stream(s): Elk River at mile 136.2
HUC-12: 060300030301
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Holding tank to hauler to Tims Ford State Park/ Extended aeration

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
CBOD5	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
CBOD5	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-7. Permit Limits for Tims Ford State Park.

EFO Comments:
No Issues.

TN0021644 Cowan Sewage Treatment Plant

Discharger rating: Minor
City: Cowan
County: Franklin
EFO Name: Columbia
Issuance Date: 6/28/02
Expiration Date: 5/29/07
Receiving Stream(s): Boiling Fork Creek at mile 13.4
HUC-12: 060300030403
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Oxidation ditch activated sludge plant with chlorination/dechlorination

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	3	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	6.7	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	2	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	5	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	4	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	3	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	6.7	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	2	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	10	lb/day	DMax Load	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	All Year	25	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	All Year	10	mg/L	DMin Conc	3/Week	Composite	Effluent
CBOD5	All Year	50	lb/day	DMax Load	3/Week	Composite	Effluent
CBOD5	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	All Year	15	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	33.4	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)

Table 6-8a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Composite	Effluent
TRC	All Year	0.03	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	133	lb/day	DMax Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	100	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-8b.

Tables 6-8a-b. Permit Limits for Cowan Sewage Treatment Plant

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Ammonia
- 1 Overflow

EFO Comments:
No issues.

TN0021814 Fayetteville Sewage Treatment Plant

Discharger rating: Major
City: Fayetteville
County: Lincoln
EFO Name: Columbia
Issuance Date: 1/31/02
Expiration Date: 1/31/07
Receiving Stream(s): Elk River Mile 90.0
HUC-12: 060300030505
Effluent Summary: Treated municipal and industrial wastewater
Treatment system: WAS to aerobic dig to land application 80%; 20% to dry beds to land application

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
BOD % removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
BOD5	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
BOD5	All Year	1118	lb/day	DMax Load	3/Week	Composite	Effluent
BOD5	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
BOD5	All Year	838	lb/day	MAvg Load	3/Week	Composite	Effluent
BOD5	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	5.4	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	5.4	Percent	DMin Conc	Quarterly	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Composite	Effluent
TRC	All Year	0.4	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	838	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	1118	lb/day	DMax Load	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-9. Permit Limits for Fayetteville Sewage Treatment Plant.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 6 TSS
- 2 Settleable Solids
- 2 E. coli
- 1 Fecal Coli
- 3 Suspended Solids % Removal
- 189 Overflows

Enforcement:

Agreed Order #05-0628

Database Notes: This permittee was originally on the Watch List for effluent violations. These Significant Non-Compliance (SNC) violation turned out to be data entry errors; however, the permittee has chronic collection system overflow problems. This Order includes CMOM requirements and a moratorium on connections to the collection system.

Submitted procedure to approve new sewer connections (item 9) on 11/7/05.

Submitted SEP for approval on 11/22/05. The SEP is for a greenway, but only has a very limited water quality component and does not include expenses. I will draft a letter for PED asking for the SEP to be revised to better address water quality concerns and requesting financial information on the proposal.

SEP proposal received 01/06/06, and approved 01/26/06. SEP valued at $25,000 (Required minimum is $10,000)

SORP received 03/14/06.

08/15/06 SSOER submitted as required by part XII, Item 3 of the order.

CMOM 2006 Self-assessment received 10/31/06.

Addendum to SEP received 11/17/06. SEP proposes to create greenway through town. Addendum changes specifications from crossing 2 city streets to only crossing 1. 11/27/06 SEP revision approved and approval letter issued on 11/30/06.

Sanitary Sewer Overflow Control Program submitted on 12/14/2006.

EFO Comments:

Recent unreported overflow.

TN0021857 Winchester Sewage Treatment Plant

Discharger rating: Major
City: Winchester
County: Franklin
EFO Name: Columbia
Issuance Date: 12/29/06
Expiration Date: 12/30/07
Receiving Stream(s): Elk River at mile 153.8
HUC-12: 060300030301
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: WAS to aerobic dig to drybds to land application

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
Ammonia as N (Total)	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
Ammonia as N (Total)	Summer	2	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	40	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1.5	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	27	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	1	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	10	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	200	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	7.5	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	133	lb/day	MAvg Load	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	Summer	20	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Summer	400	lb/day	DMax Load	3/Week	Composite	Effluent
CBOD5	Summer	15	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Summer	10	mg/L	DMin Conc	3/Week	Composite	Effluent
CBOD5	Summer	267	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Winter	30	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Winter	667	lb/day	DMax Load	3/Week	Composite	Effluent
CBOD5	Winter	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Winter	534	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Winter	20	mg/L	DMin Conc	3/Week	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	25.6	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	25.6	Percent	DMin Conc	Quarterly	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	MAvg Conc	2/Month	Composite	Effluent

Table 6-10a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Phosphorus, Total	All Year		mg/L	MAvg Conc	2/Month	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Composite	Effluent
TRC	All Year	0.09	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	1068	lb/day	DMax Load	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS	All Year	801	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-10b.

Tables 6-10a-b. Permit Limits for Winchester Sewage Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 3 Ammonia
- 32 Overflows
- 52 Bypasses

EFO Comments:
Need to confer with Nashville EFO.

TN0023469 Tullahoma Sewage Treatment Plant

Discharger rating: Major
City: Tullahoma
County: Coffee
EFO Name: Columbia
Issuance Date: 1/31/04
Expiration Date: 1/30/07
Receiving Stream(s): Rock Creek at mile 11.0
HUC-12: 060300030305
Effluent Summary: Treated municipal water from Outfall 001
Treatment system: WAS to thickner to aerobic dig to land application

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ag (T)	All Year	0.05	mg/L	MAvg Conc	Semi-annually	Composite	Effluent
Ammonia as N (Total)	Summer	3	mg/L	DMax Conc	Weekdays	Composite	Effluent
Ammonia as N (Total)	Summer	94	lb/day	DMax Load	Weekdays	Composite	Effluent
Ammonia as N (Total)	Summer	2.25	mg/L	MAvg Conc	Weekdays	Composite	Effluent
Ammonia as N (Total)	Summer	1.5	mg/L	WAvg Conc	Weekdays	Composite	Effluent
Ammonia as N (Total)	Summer	63	lb/day	MAvg Load	Weekdays	Composite	Effluent
Ammonia as N (Total)	Winter	6.5	mg/L	DMax Conc	Weekdays	Composite	Effluent
Ammonia as N (Total)	Winter	136	lb/day	MAvg Load	Weekdays	Composite	Effluent
Ammonia as N (Total)	Winter	204	lb/day	DMax Load	Weekdays	Composite	Effluent
Ammonia as N (Total)	Winter	3.25	mg/L	WAvg Conc	Weekdays	Composite	Effluent
Ammonia as N (Total)	Winter	4.9	mg/L	MAvg Conc	Weekdays	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
CBOD5	All Year	40	mg/L	DMax Conc	Weekdays	Composite	Effluent
CBOD5	All Year	1043	lb/day	MAvg Load	Weekdays	Composite	Effluent
CBOD5	All Year	35	mg/L	MAvg Conc	Weekdays	Composite	Effluent
CBOD5	All Year	25	mg/L	DMin Conc	Weekdays	Composite	Effluent
CBOD5	All Year	1460	lb/day	DMax Load	Weekdays	Composite	Effluent
Cu (T)	All Year	0.031	mg/L	MAvg Conc	Semi-annually	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	Weekdays	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	95.6	Percent	DMin Conc	Monthly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	95.6	Percent	DMin Conc	Monthly	Composite	Effluent
NOEL 7day Ceriodaphnia Dubia	All Year	96	Percent	DMin Conc	Quarterly	Composite	Effluent
NOEL 7day Fathead Minnows	All Year	96	Percent	DMin Conc	Quarterly	Composite	Effluent

Table 6-11a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Composite	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Weekdays	Composite	Effluent
TSS	All Year	1668	lb/day	DMax Load	Weekdays	Composite	Effluent
TSS	All Year	30	mg/L	WAvg Conc	Weekdays	Composite	Effluent
TSS	All Year	1251	lb/day	MAvg Load	Weekdays	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	Weekdays	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-11b.

Tables 6-11a-b. Permit Limits for Tullahoma Sewage Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 3 Ammonia
- I Chlorine
- 1 Fecal coliform
- 20 Overflows
- 49 Bypasses

EFO Comments:
Need to confer with Nashville EFO.

TN0065498 Unity School

Discharger rating: Minor
City: Petersburg
County: Lincoln
EFO Name: Columbia
Issuance Date: 8/29/02
Expiration Date: 8/30/07
Receiving Stream(s): Morton Branch at mile 1.0
HUC-12: 060300030902
Effluent Summary: Treated domestic water from Outfall 001
Treatment system: Septic tank recirculating sand filter

Segment	TN06030003063_0300
Name	Morton Branch
Size	5.9
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-12. Stream Segment Information for Unity School.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	2.5	mg/L	DMax Conc	Monthly	Grab	Effluent
Ammonia as N (Total)	Summer	1.25	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	Summer	25	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	Summer	15	mg/L	MAvg Conc	Monthly	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	Monthly	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	Monthly	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
pH	All Year	8.5	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-13. Permit Limits for Unity School.

EFO Comments:
No issues.

TN0067202 University of Tennessee Space Institute

Discharger rating: Minor
City: Tullahoma
County: Coffee
EFO Name: Columbia
Issuance Date: 6/28/02
Expiration Date: 8/30/07
Receiving Stream(s): Rollins Creek Embayment (Woods Reservoir) at mile 0.7
HUC-12: 060300030201
Effluent Summary: Treated domestic water from Outfall 001
Treatment system: Extended aeration

Segment	TN06030003036_1000
Name	Woods Reservoir
Size	3908
Unit	Acres
First Year on 303(d) List	1990
Designated Uses	Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Recreation (Non-Supporting), Fish and Aquatic Life (Supporting), Industrial Water Supply (Supporting)
Causes	Polychlorinated biphenyls
Sources	Contaminated Sediments

Table 6-14. Stream Segment Information for University of Tennessee Space Institute.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	4	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Summer	2	mg/L	MAvg Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Winter	10	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Winter	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
CBOD5	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
CBOD5	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-15. Permit Limits for University of Tennessee Space Institute.

EFO Comments:
No issues.

TN0076007 Elkton Sewage Treatment Plant

Discharger rating: Minor
City: Elkton
County: Giles
EFO Name: Columbia
Issuance Date: 8/30/02
Expiration Date: 8/30/07
Receiving Stream(s): Elk River at mile 49.2
HUC-12: 0603000301905
Effluent Summary: Treated municipal water from Outfall 001
Treatment system: Septic tank effluent pump (STEP) collection system, recirculating sand filter with UV disinfection

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	All Year	25	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	15	mg/L	MAvg Conc	2/Month	Grab	Effluent
CBOD5	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
CBOD5	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	3	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TSS	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-16. Permit Limits for Elkton Sewage Treatment Plant.

EFO Comments:
Need to confer with Nashville EFO.

6.4.B. Industrial Permits

TN0078697 Pelham Industrial Park RSF

Discharger rating: Minor
City: Pelham
County: Grundy
EFO Name: Chattanooga
Issuance Date: 7/29/05
Expiration Date: 7/29/07
Receiving Stream(s): Elk River at mile 195.2
HUC-12: 060300030103
Effluent Summary: Sanitary wastewater from Outfall 001
Treatment system: Recirculating sand filter

Segment	TN06030003044_1000
Name	Elk River
Size	17.9
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting)
Causes	N/A
Sources	N/A

Table 6-17. Stream Segment Information for Pelham Industrial Park RSF.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	Summer	2	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	4	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	4	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	8	mg/L	DMax Conc	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	Summer	40	Percent	DMin % Removal	3/Week	Calculated	Percent Removal
CBOD % Removal	Winter	40	Percent	DMin % Removal	3/Week	Calculated	Percent Removal
CBOD5	All Year	15	mg/L	MAvg Conc	Semi-annually	Grab	Effluent
CBOD5	Summer	10	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Summer	20	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Summer		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Summer		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Winter	30	mg/L	DMax Conc	3/Week	Composite	Effluent

Table 6-18a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
CBOD5	Winter		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Winter		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
D.O.	All Year	3	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Settleable Solids	All Year	1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TRC	All Year	0.63	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	10	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	20	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	Percent Removal
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent

Table 6-18b.

Tables 6-18a-b. Permit Limits for Pelham Industrial Park RSF.

EFO Comments:
No issues.

TN0003751 Arnold Engineering Development Center

Discharger rating: Minor
City: Arnold Air Force Base
County: Franklin
EFO Name: Columbia
Issuance Date: 4/8/05
Expiration Date: 5/31/07
Receiving Stream(s): **U**nnamed tributary to Rowland Creek (001); unnamed tributary to Bradley Creek (002, SW2 & 007); unnamed tributary to Brumalow Creek (003, SW3 & 005); unnamed tributary to Spring Creek (006); and Woods Reservoir (004 & 008)
HUC-12: 060300030205
Effluent Summary: Treated process wastewater, non-process wastewater, sanitary wastewater, remediated groundwater and storm water runoff from Outfall 001; process wastewater, non-process wastewater, remediated groundwater, and storm water runoff from Outfall SW2; process wastewater, non-process wastewater and storm water runoff from SW3 (incl. Outfall 005); non-process wastewater during scheduled maintenance activities that require shutdown of the pumping station and system malfunctions from Outfalls 002 and 003; treated sanitary wastewater from Outfall 004; steam plant condensate and reverse osmosis wastewater, process wastewater, noncontact cooling water and storm water runoff from Outfall 005; treated groundwater from Outfall 006; nonprocess wastewater, building groundwater drainage, and non-industrial
Treatment system: WAS to anaerobic digester to dry bed to land application

Segment	TN06030003435_1000
Name	Rollins Creek
Size	11.9
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Irrigation (Supporting), Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Non-Supporting), Industrial Water Supply (Supporting), Recreation (Not Assessed)
Causes	Low flow alterations, Temperature, water
Sources	Industrial Point Source Discharge

Table 6-19. Stream Segment Information for Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ag (T)	All Year	0.003	mg/L	DMax Conc	Monthly	Composite	Effluent
Ammonia as N (Total)	All Year	2.2	mg/L	DMax Conc	Weekly	Composite	Effluent
Ammonia as N (Total)	All Year	1.1	mg/L	MAvg Conc	Weekly	Composite	Effluent
CBOD5	All Year	25	mg/L	DMax Conc	Weekly	Composite	Effluent
CBOD5	All Year	15	mg/L	MAvg Conc	Weekly	Composite	Effluent
Cd (T)	All Year	0.005	mg/L	DMax Conc	Weekly	Composite	Effluent
Cd (T)	All Year	0.003	mg/L	MAvg Conc	Weekly	Composite	Effluent
Cr (T)	All Year	0.2	mg/L	DMax Conc	Monthly	Composite	Effluent
Cr (T)	All Year	0.1	mg/L	MAvg Conc	Monthly	Composite	Effluent
Cu (T)	All Year	0.04	mg/L	DMax Conc	Monthly	Composite	Effluent
Cu (T)	All Year	0.03	mg/L	MAvg Conc	Monthly	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekly	Grab	Effluent
Dissolved Solids, Total (TDS)	All Year		mg/L	DMax Conc	Monthly	Composite	Effluent
Dissolved Solids, Total (TDS)	All Year		mg/L	DMax Conc	Monthly	Composite	Influent (Raw Sewage)
Dissolved Solids, Total (TDS)	All Year		mg/L	MAvg Conc	Monthly	Composite	Effluent
Dissolved Solids, Total (TDS)	All Year		mg/L	MAvg Conc	Monthly	Composite	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	100	Percent	DMin Conc	Semi-annually	Composite	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	Monthly	Grab	Effluent
Oil and Grease (Freon EM)	All Year	10	mg/L	MAvg Conc	Monthly	Grab	Effluent
Pb (T)	All Year	0.1	mg/L	DMax Conc	Weekly	Composite	Effluent
Pb (T)	All Year	0.01	mg/L	MAvg Conc	Weekly	Composite	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Weekly	Grab	Effluent
TRC	All Year	0.011	mg/L	MAvg Conc	Weekly	Grab	Effluent
TSS	All Year		mg/L	DMax Conc	Monthly	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Monthly	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	Monthly	Composite	Influent (Raw Sewage)
TSS	All Year		mg/L	MAvg Conc	Monthly	Composite	Influent (Raw Sewage)
Temperature (°C)	All Year		°C	DMax Conc	Continuous	Recorder	Effluent
pH	All Year	9	SU	DMax Conc	Continuous	Recorder	Effluent
pH	All Year	6.5	SU	DMin Conc	Continuous	Recorder	Effluent

Table 6-20. Permit Limits for Outfall 001 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
COD	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Flow	All Year		MGD	DMax Load	1/Discharge	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	15	mg/L	DMax Conc	1/Discharge	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	1/Discharge	Grab	Effluent
Temperature (°C)	All Year		°C	DMax Conc	1/Discharge	Grab	Effluent
pH	All Year	9	SU	DMax Conc	1/Discharge	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	1/Discharge	Grab	Effluent

Table 6-21. Permit Limits for Outfall 002 and 003 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	8	mg/L	DMax Conc	2/Month	Composite	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	2/Month	Composite	Effluent
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Composite	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Composite	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	400	#/100mL	DMax Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.5	mg/L	DMax Conc	2/Week	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-22. Permit Limits for Outfall 004 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Monthly	Estimate	Effluent
Oil and Grease (Freon EM)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Temperature (°C)	All Year		°C	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-23. Permit Limits for Outfall 005 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
1,1-Dichloroethylene	All Year	0.005	mg/L	DMax Conc	Quarterly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Quarterly	Estimate	Effluent
Flow	All Year		MGD	MAvg Load	Quarterly	Estimate	Effluent
Methylene Chloride	All Year	0.025	mg/L	DMax Conc	Quarterly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-24. Permit Limits for Outfall 006 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Monthly	Estimate	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-25. Permit Limits for Outfall 007 and 008 at Arnold Engineering Development Center.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Quarterly	Estimate	Effluent
Trichloroethylene	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
pH	All Year		SU	DMax Conc	Quarterly	Grab	Effluent
pH	All Year		SU	DMin Conc	Quarterly	Grab	Effluent

Table 6-26. Permit Limits for Outfall 01b at Arnold Engineering Development Center.

EFO Comments:

Developing and testing of aerospace systems and components in aerodynamic, propulsion, and space environmental ground test facilities that simulate flight conditions. No issues.

TN0027537 TVA Tims Ford Hydro Plant

Discharger rating: Major
City: Winchester
County: Franklin
EFO Name: Columbia
Issuance Date: 4/30/02
Expiration Date: 4/30/07
Receiving Stream(s): Elk River at mile 133.3
HUC-12: 060300030501
Effluent Summary: cooling water from Outfall 001
Treatment system:

No Limits.

Comments:
Hydroelectric services

TN0001953 Jack Daniel Distillery, Lem Motlow Prop, Inc.

Discharger rating: Major
City: Lynchburg
County: Moore
EFO Name: Columbia
Issuance Date: 12/16/02
Expiration Date: 12/31/07
Receiving Stream(s): East Fork Mulberry Creek at mile 12.9 (Outfalls 001 and SW1) and mile 13.3 (Outfalls 002, SW2 and SW3)
HUC-12: 060300030701
Effluent Summary: Cooling water, boiler blowdown, spring water, effluent from sequencing batch reactor (SBR), outside washwater and storm water runoff from Outfall 001, effluent from SBR from Outfall 002, and storm water runoff from Outfalls SW1, SW2 and SW3
Treatment system: Aeration, Mixing, Evaporation, Settling, Chemical Oxidation, Neutralization, Filtration, Ion Exchange, and Disinfection.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	All Year	3	mg/L	DMax Conc	Weekly	Grab	Effluent
Ammonia as N (Total)	All Year	2	mg/L	MAvg Conc	Weekly	Grab	Effluent
CBOD5	All Year	15	mg/L	DMax Conc	Weekly	Grab	Effluent
CBOD5	All Year	10	mg/L	MAvg Conc	Weekly	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekly	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	51	Percent	DMin Conc	Annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	51	Percent	DMin Conc	Annually	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Phosphorus, Total	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.03	mg/L	DMax Conc	Weekly	Grab	Effluent
Temperature (°C)	All Year		Deg. C	DMax Conc	Weekly	Grab	Effluent
Temperature (°C)	All Year		Deg. C	MAvg Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-27. Permit Limits for Outfall 001 at Jack Daniel Distillery, Lem Motlow Prop, Inc.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Ammonia as N (Total)	All Year	4.5	mg/L	DMax Conc	Weekly	Grab	Effluent
Ammonia as N (Total)	All Year	7.5	mg/L	DMax Conc	Weekly	Grab	Effluent
Ammonia as N (Total)	All Year	3	mg/L	MAvg Conc	Weekly	Grab	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	Weekly	Grab	Effluent
CBOD5	All Year	30	mg/L	DMax Conc	Weekly	Grab	Effluent
CBOD5	All Year	45	mg/L	DMax Conc	Weekly	Grab	Effluent
CBOD5	All Year	20	mg/L	MAvg Conc	Weekly	Grab	Effluent
CBOD5	All Year	30	mg/L	MAvg Conc	Weekly	Grab	Effluent

Table 6-28a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
D.O.	All Year	6	mg/L	DMin Conc	Weekly	Grab	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	60	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	25	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	60	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	25	Percent	DMin Conc	Quarterly	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Phosphorus, Total	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-28b.

Table 6-28 a-b. Permit Limits for Outfall 002 at Jack Daniel Distillery, Lem Motlow Prop, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
CBOD5	All Year	30	mg/L	DMax Conc	Weekly	Grab	Effluent
CBOD5	All Year	90	lb/day	DMax Load	Weekly	Grab	Effluent
CBOD5	All Year	20	mg/L	MAvg Conc	Weekly	Grab	Effluent
CBOD5	All Year	60	lb/day	MAvg Load	Weekly	Grab	Effluent
TSS	All Year	50	mg/L	DMax Conc	Weekly	Grab	Effluent
TSS	All Year	150	lb/day	DMax Load	Weekly	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Weekly	Grab	Effluent
TSS	All Year	90	lb/day	MAvg Load	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-29. Permit Limits for Outfall 01B at Jack Daniel Distillery, Lem Motlow Prop, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Floating Solids Or Visible Foam-Visual	All Year		Visual	DMax Load	Semi-annually	Visual	Effluent
Floating Solids Or Visible Foam-Visual	All Year		YES=1 NO=0	DMax Load	Semi-annually	Visual	Effluent
Floating Solids Or Visible Foam-Visual	All Year		Visual	MAvg Load	Semi-annually	Visual	Effluent
pH	All Year		SU	DMax Conc	Semi-annually	Grab	Effluent
pH	All Year		SU	DMin Conc	Semi-annually	Grab	Effluent

Table 6-30. Permit Limits for Outfall 003 at Jack Daniel Distillery, Lem Motlow Prop, Inc.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 4 Dissolved Oxygen
- 1 pH.

EFO Comments:

No issues.

6.4.B. Water Treatment Plant Permits

TN0060372 Monteagle Water Treatment Plant

Discharger rating: Minor
City: Monteagle
County: Marion
EFO Name: Chattanooga
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Laurel Branch at mile 0.3 to Trussell Creek
HUC-12: 060300030103
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Ferric chloride, chlorine, caustic soda, fluoride, potassium permanganate, Aquodine

Segment	TN06030003044_0730
Name	Trussel Creek
Size	4.3
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed)
Causes	Solids (Suspended/Bedload), Nutrient/Eutrophication Biological Indicators, 461, Oxygen, Dissolved
Sources	Municipal Point Source Discharges

Table 6-31. Stream Segment Information for Monteagle Water Treatment Plant.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Fe (T)	All Year	2	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-32. Permit Limits for Monteagle Water Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Aluminum exceedence.

Comments:
Iron and turbidity removal Water Treatment Plant

TN0004979 Fayetteville Water Treatment Plant

Discharger rating: Minor
City: Fayetteville
County: Lincoln
EFO Name: Columbia
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Elk River at miles 93.8
HUC-12: 060300030505
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Ferric chloride, chlorine, caustic soda, fluoride, potassium permanganate, Aquodine

Segment	TN06030003010_1000
Name	Elk River
Size	13.91
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Domestic Water Supply (Supporting), Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Recreation (Non-Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-33. Stream Segment Information for Fayetteville Water Treatment Plant.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-34. Permit Limits for Fayetteville Water Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 5 Settleable Solids

Comments:
Iron, manganese and turbidity removal Water Treatment Plant

TN0074853 Huntland Water Treatment Plant

Discharger rating: Minor
City: Huntland
County: Franklin
EFO Name: Columbia
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Mathias Branch into Beans Creek at approximate mile 2.0
HUC-12: 060300030601
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: -

Segment	TN06030003012_0999
Name	Misc Tribs to Beans Creek
Size	26.3
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Livestock Watering and Wildlife (Not Assessed), Fish and Aquatic Life (Not Assessed), Recreation (Not Assessed), Irrigation (Not Assessed)
Causes	N/A
Sources	N/A

Table 6-35. Stream Segment Information for Huntland Water Treatment Plant.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-36. Permit Limits for Huntland Water Treatment Plant

Compliance History:
None noted.

Comments:
Turbidity removal Water Treatment Plant

TN0073687 Center Grove Winchester Springs Utility Department

Discharger rating: Minor
City: Estill Springs
County: Franklin
EFO Name: Columbia
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Little Hurricane Creek at mile 4.2
HUC-12: 060300030306
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Magnesium and turbidity removal with aluminum sulfate, polymer, sodium hydroxide

Segment	TN06030003406_1000
Name	Little Hurricane Creek
Size	5.02
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-37. Stream Segment Information for Center Grove Winchester Springs Utility Department.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-38. Permit Limits for Center Grove Winchester Springs Utility Department.

Comments:
Turbidity removal Water Treatment Plant

TN0074837 Estill Springs Water Treatment Plant

Discharger rating: Minor
City: Estill Springs
County: Franklin
EFO Name: Columbia
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Taylor Creek at mile 1.5 of the Elk River
HUC-12: 060300030304
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Chlorine, alum, caustic soda, phosphate and fluoride

Segment	TN06030003432_1000
Name	Taylor Creek
Size	9.1
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-39. Stream Segment Information for Estill Springs Water Treatment Plant.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-40. Permit Limits for Estill Springs Water Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 pH
- 1 Aluminum
- 7 Chlorine.

Comments:
Iron, manganese and turbidity removal Water Treatment Plant

TN0061191 Metro Moore County Utility Department

Discharger rating: Minor
City: Lynchburg
County: Moore
EFO Name: Columbia
Issuance Date: 9/29/04
Expiration Date: 9/29/09
Receiving Stream(s): Mulberry Creek
HUC-12: 060300030701
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Chlorine, potassium permanganate, aluminum sulfate added at flash mix for coagulation, oxidation and manganese reduction; fluoride, sodium phosphate added at clear well

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-41. Permit Limits for Metro Moore County Utility Department.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 23 Chlorine

Comments:
Manganese and turbidity removal Water Treatment Plant

TN0068462 Teal Hollow Springs Water Treatment Plant

Discharger rating: Minor
City: Kelso
County: Lincoln
EFO Name: Columbia
Issuance Date: 10/07/04
Expiration Date: 9/29/09
Receiving Stream(s): Unnamed tributary to Dukes Creek
HUC-12: 060300030504
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Aluminum chlorhydrate (ACS) as coagulant and disinfection with chlorine

Segment	TN06030003010_0500
Name	Dukes Creek
Size	14.4
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-42. Stream Segment Information for Teal Hollow Springs Water Treatment Plant.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	0.75	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.019	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-43. Permit Limits for Teal Hollow Springs Water Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 2 Chlorine.

Comments:
Turbidity removal Water Treatment Plant

TN0005665 Winchester Water System WTP

Discharger rating: Minor
City: Winchester
County: Franklin
EFO Name: Columbia
Issuance Date: 2/15/06
Expiration Date: 9/27/09
Receiving Stream(s): Elk River at mile 154.7 to Tims Ford Reservoir
HUC-12: 060300030301
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Chlorine, fluoride, NaMnO4, PAC, aquadine, caustic soda

Segment	TN06030003015_1000
Name	Elk River
Size	15.4
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Livestock Watering and Wildlife (Supporting), Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Supporting), Irrigation (Supporting)
Causes	Low flow alterations, Temperature, water
Sources	Upstream Impoundments (e.g., PI-566 NRCS Structures)

Table 6-44. Stream Segment Information for Winchester Water System WTP.

PARAMETER	*SEASON*	*LIMIT*	*UNITS*	*SAMPLE DESIGNATOR*	*MONITORING FREQUENCY*	*SAMPLE TYPE*	*MONITORING LOCATION*
Al (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Fe (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-45. Permit Limits for Winchester Water System WTP.

Compliance History:
The following numbers of exceedences were noted in PCS:

Enforcement:

EFO Comments: None